

REMARKS:

The rejection of claims 3-10 and 18 under 35 U.S.C. §112 ¶1, including the objection to the specification under 37 C.F.R. §1.71, is traversed. Reconsideration of both the rejection and the objection is earnestly solicited.

With regard to claim 3, the hinge points are shown at 10a, 10b, 11a, and 11b. Thus, claim 3 as presently worded is deemed to be adequately described in the specification.

With regard to claim 10 and the disclosure of the inner and outer slides, we submit that one of ordinary skill in the art will fully understand how the device is supposed to be connected to make the system work. Press installations with inner and outer slides have been known for some time, see for example U.S. Patent No. 5, 375,513. Thus, one of ordinary skill in the art, given the disclosure of the present application, will have no problem whatsoever in devising a driving mechanism without undue experimentation. Nothing in the record suggests otherwise.

Claim 18 is now deemed to have proper antecedent basis in light of changes to claim 11.

Likewise, the rejection of claims 3-10, 12 and 14-17 under 35 U.S.C. §112, ¶2 is traversed. Reconsideration of that rejection is requested in light of the above amendments to the claims which attempt to address, where deemed appropriate, the objected - to language. With regard to claims 9 and 10, however, the issue of "how" the knee link elements are connected or related to each other is not a subject necessarily for the claims in the absence of prior art but is one directed to the disclosure. Applicant submits that the disclosure in the

present application is sufficient to enable one skilled in the art to know how the knee link elements are connected together or related to each other. Nevertheless, applicant has also attempted to amend those claims in an effort to eliminate any possible confusion.

Of course, to the extent that the Examiner deems other, non-limiting changes to be appropriate in order to improve the readability of the claims, he is requested to the undersigned in an effort to work out mutually acceptable claim language. Otherwise, the undersigned has made every effort to check the claims for clarity and definiteness.

The rejection of claims 1, 2, 11-14 and 18 as being anticipated by Eigenmann under 35 U.S.C. §102(b) and the rejection of claims 3-9 and 15-17 as being unpatentable over Eigenmann under 35 U.S.C. §103(a) are traversed. Reconsideration of those rejections is requested for the following reasons. The Eigenmann patent does not teach a press that anticipates or renders obvious the subject matter of independent claim 1. In particular, that reference neither teaches nor suggest a linkage systems in which there are three links, one of which is connected to the press frame, one of which is connected to the slide or ram and another of them connecting the first mentioned two links. Nor there is anything in the Eigenmann patent which would suggest that there is a controlled movement between the driving device and the connecting elements to define or control the movement of the connecting element. The Eigenmann patent fails to teach or suggest the use of two additional link elements in conjunction with the connecting elements to form a parallelogram. To the contrary, the Eigenmann patent discloses a punch press that utilizes a toggle

joint linkage mechanism without any intermediate link as defined in claims 1 and 11. That is, Fig. 1 of the Eigenmann patent shows upper levers 15a, 16a and lower levers 15b, 16b that have connecting levers 9a, 9b which are connected with the upper and lower levers by the common pins 11, 12.

The Eigenmann patent does not recognize the possibility and importance of providing the connecting elements and additional links to form a parallelogram. In the present invention, the applicant has provided a press in which one or more slides can be lifted by two linkage mechanisms each of which consist of three links. Thereby, the slide movement is not only defined by a sideward movement of two links but also by a tilting movement of those links.

In contrast, the Eigenmann punch press is directed to a device having two rams 56, 57 that are driven by an eccentric shaft acting thereupon by way of the two toggle joint lever mechanisms. We have mentioned above the construction of the left side of that mechanism in which the links 15a, 15b, 16a and 16b are connected by pins 11, 12. Thereby, the ram 56 moves exclusively in response to a sideward movement of the lever 9a which connects pins 11, 12. Sideward movement of the lever 9a is right about by the movement of the forked connecting rod 5 which is supported on the eccentric shaft 1. The lever 9a is not influenced, however, by any tilting movement of the connecting rod 5.

A major difference in structure between the present invention as now claimed and that of the Eigenmann punch press is that the applicant here had to solve a problem in which very large work pieces are deep drawn by the press. Such big pieces require rams or slides that may have relatively small height but can be very broad and long. As a consequence, such slides or rams have to be

moved by at least two linkages, and these linkages have to be moved in absolute synchronism. Achieving synchronicity is no easy matter. However, applicant was able to do in an ingeniously simple matter by the parallelogram arrangement of the elements 12, 13 and 9a, 9b. Thereby, the parallelogram that is formed transmits not only sideward movement of the link 9a to the link 9b but also any tilting movement. The graphs shown in Fig. 7 of the present application illustrates the path covered by the outer and inner slides to a, to b respectively over the crank angle of the main shaft. A toggle mechanism press such as disclosed in the Eigenmann patent could not provide a similar graph in the lower section where the outer and inner slides are shown to have nearly linear slow movement that is obtained with the parallelogram structure in which tilting movement of the lever 9 does not heavily influence the flat shape of the curve over the course of the crank angle.

For the foregoing reasons, the rejection of claim 10 as being unpatentable over Eigenmann in view of Kita under 35 U.S.C. §103(a) is traversed. Reconsideration of that rejection is also requested, particularly as the Kita presses a far more complicated device which does not employ the use of the parallelogram mechanism. Fig. 1 of the Kita patent shows a relatively complicated linkage mechanism which does not utilize the concept of the present invention. Thus, even if one could accept, for arguments sake, that the teachings of Kita would have been employable in the press of Eigenmann without exercising impermissible hindsight, the resulting hypothetical combination would not teach or suggest the present invention. At most, Kita shows what

applicant has acknowledge above, mainly that presses with inner and outer slides are well known.

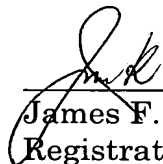
For the foregoing reasons, reconsideration and favorable action upon the claims in this application are earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #852/50752).

Respectfully submitted,

February 28, 2003



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